

Name: \_\_\_\_\_

**at1110paper\_\_practice\_\_test (v103)**

1. Factor the expression.

$$x^2 + 4x - 12$$

$$(x + 6)(x - 2)$$

2. Expand the following expression into standard form.

$$(9x + 5)(7x + 2)$$

$$63x^2 + 18x + 35x + 10$$

$$63x^2 + 53x + 10$$

3. Factor the expression.

$$25x^2 - 16$$

$$(5x + 4)(5x - 4)$$

4. Solve the equation.

$$6x^2 + 6x - 7 = 3x^2 - 2x - 4$$

$$3x^2 + 8x - 3 = 0$$

$$(3x - 1)(x + 3) = 0$$

$$x = \frac{1}{3} \quad x = -3$$

5. Solve the equation.

$$(5x + 8)(2x + 9) = 0$$

$$x = \frac{-8}{5} \quad x = \frac{-9}{2}$$

6. Expand the following expression into standard form.

$$(9x + 8)^2$$

$$81x^2 + 72x + 72x + 64$$
$$81x^2 + 144x + 64$$

7. Expand the following expression into standard form.

$$(9x - 7)(9x + 7)$$

$$81x^2 + 63x - 63x - 49$$
$$81x^2 - 49$$

8. Solve the equation with factoring by grouping.

$$15x^2 - 20x + 18x - 24 = 0$$

$$(5x + 6)(3x - 4) = 0$$
$$x = \frac{-6}{5} \quad x = \frac{4}{3}$$